

Math 112
ReQuiz 05A06A

2022-02-01 (T)

Your name: _____

Exercise

(4 pt) Consider the function

$$f : \mathbf{R} \rightarrow \mathbf{R} \quad \text{given by} \quad f(x) = (x^2 - 1)^5 - \sin(\pi x)$$

(a) (3 pt) Compute the linearization of (aka linear approximation to) f at $x = 1$.

(b) (1 pt) Use your linearization from part (a) to approximate the value $f(0)$. Find the error in this approximation.